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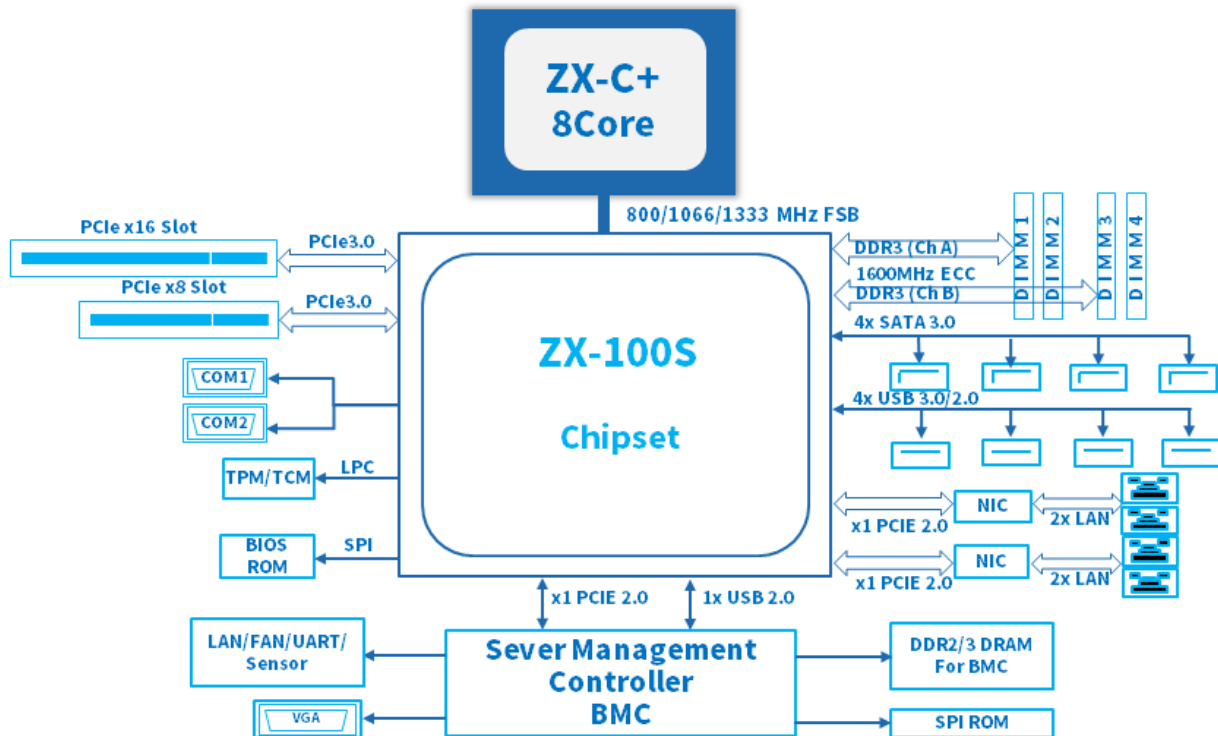
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Server & Storage Reference Solution

Kaixian ZX-C+ 8 Core Processor + ZX-100S Chipset



Server & Storage Solution

ZX-C+ series processor is a new generation CPU, designed for high performance computing. There are 8 cores integrated on dual die which packaged together. Furthermore, ZX-C+ processors have a higher multi-threaded optimization capability. Featuring out-of-order technology, it supports native 64-bit software support, VT CPU virtualization technology, and physical encryption and decryption, for example SM3 and SMS4 cryptographic algorithm.

ZX-C+ processors are built using the latest 28nm fabrication process. Its' package size is 21mm x 21mm and pin to pin compatible with ZX-A and ZX-C.

ZX-100S is a new generation and high performance chipset for both PC and server/storage solution. It can support dual channel architecture and 64GB physical memory with 4 ECC UDIMMs.

ZX-100S offers a better IO scalability. It can support PCIe 3.0 with hot-plug and VT-d technology. There are up to 19 PCIe 3.0 lanes, 6 ports, and 14 of those lanes can be shared with SATA.

Moreover, it can also support three USB 3.0 and six USB2.0 pots.

On the display side, ZX-100S support for the latest connectivity standards including Display Port, HDMI, DVP, VGA. Furthermore, there is an eBMC for remote control function.

In conclusion, ZX-C+ 8 core processors and ZX-100S solution can offer end users a basic server and storage solution.

ZX-C+ 8 Core Specifications

Essentials	
CPU Name	FC-108X
Launch Date	Q1'16
CPU TDP	35W
# of Cores/ Threads	8C/8T
Clock Speed	2.0GHz
Adaptive Overclocking	NO
Max Turbo Frequency	NO
L2 Cache	4MB With ECC(Shared)
Instruction Set	x86 and x64 (64-bit)
Instruction Set Extensions	SSE4.2/AVX/AVX2
System Bus Type	FSB
System Bus Clock	1333MHz
APIC Supported	Yes
Hardware Virtualization (VMX) Supported	
VT-x with EPT Supported (INTEL®VT-X Compatible)	Yes
Dynamic Power Saving	
Thermal Monitoring and Catastrophic Thermal Protection	Yes
Low power consumption	Yes
Enhanced PowerSaver	Yes
Power Management States Support	Yes
C-State Support (C1-C4)	Yes
P-State Support	Yes
Data Protection Technology (PADLOCK)	
Advanced Cryptography Engine (ACE)	Yes
Secure Hash Algorithm: SHA-1	Yes
Secure Hash Algorithm: SHA-256	Yes
Secure Algorithm: SM3/SMS4	Yes
Random Number Generator	Yes
Platform Protection Technology	
Trusted Execution Technology(TXT)	No
NoExecute Support	Yes
Manufacturing & Package Specifications	
Manufacturing Process	28nm
Package Type	FCBGA
T _{junction} (°C)	90
Package Size	21mm x 21mm
Wide Temperature (-40~60°C)	No

ZX-100S Specifications

Essentials	
Chipset Name	ZX-100S
Launch Date	Q2'16
Chipset TDP	15.5W---UMA case 13W---No UMA
Max Memory Size (dependent on memory type)	64GB
Memory Clock	1333/1600MHz
Memory Types	DDR3/DDR3L UDIMM/SODIMM
# of Memory Channels	2
Max Memory Slots	4
Max Memory Size per Slots	16GB
ECC Memory Supported	YES
Physical Address Extensions	64-bit
Graphics Specifications	
Integrated Graphics Processor	YES
DisplayPort	DP/HDMI/DVP/VGA
Expansion Options & I/O Specifications	
PCI express Revision	3
Max # of PCI express Lanes	19
Max # of PCI express Ports	6
SATA Revision	3
Total # of SATA Ports	14 max, all shared with PCIE
Total # of USB3.0	3
Total # of USB2.0	6
MISC	LPC, SMBus, SPI, UART, GPIO
Manufacturing & Package Specifications	
Manufacturing Process	40nm
Package Type	FCBGA
T _{junction} (°C)	90
Package Size	33mmx33mm
Wide Temperature (-40~60°C)	No